



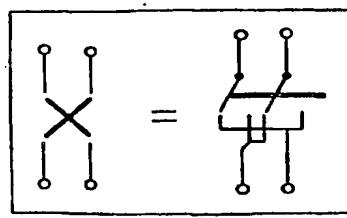
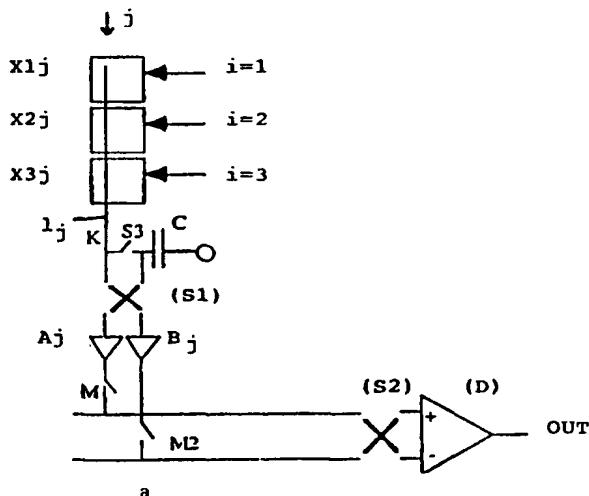
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : <b>H04N 3/15, 5/217</b>	<b>A1</b>	(11) International Publication Number: <b>WO 99/16238</b>						
		(43) International Publication Date: <b>1 April 1999 (01.04.99)</b>						
<p>(21) International Application Number: <b>PCT/BE98/00139</b></p> <p>(22) International Filing Date: <b>22 September 1998 (22.09.98)</b></p> <p>(30) Priority Data:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">97870143.1</td> <td style="width: 33%;">22 September 1997 (22.09.97)</td> <td style="width: 33%;">EP</td> </tr> <tr> <td>97870170.4</td> <td>24 October 1997 (24.10.97)</td> <td>EP</td> </tr> </table> <p>(71) Applicant (<i>for all designated States except US</i>): INTERUNIVERSITAIR MICRO-ELEKTRONICA CENTRUM [BE/BE]; Vereniging Zonder Winstbejag, Kapeldreef 75, B-3001 Heverlee (BE).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (<i>for US only</i>): DIERICKX, Bart [BE/BE]; Cornelis Deherdstraat 8, B-2640 Motsel (BE). KAVADIAS, Spyros [GR/BE]; Predikherinnenstraat 6, B-3000 Leuven (BE).</p> <p>(74) Agents: VAN MALDEREN, Joëlle et al.; Office Van Malderen, Place Reine Fabiola 6/1, B-1083 Brussels (BE).</p>		97870143.1	22 September 1997 (22.09.97)	EP	97870170.4	24 October 1997 (24.10.97)	EP	<p>(81) Designated States: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, DE, DE (Utility model), EE, GD, GE, HR, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report.</i></p>
97870143.1	22 September 1997 (22.09.97)	EP						
97870170.4	24 October 1997 (24.10.97)	EP						

(54) Title: DEVICES AND METHODS FOR IMPROVING THE IMAGE QUALITY IN AN IMAGE SENSOR

## (57) Abstract

The present invention is related to an image sensor comprising an array of rows (i) and columns (j) of pixels ( $X_{ij}$ ), all the pixels of one column of the array being connected to at least one common pixel output line ( $I_j$ ) having at least one memory element ( $M_j$ ) and at least a first amplifying element ( $A_j$ ), all these amplifying elements ( $A_j$ ) being connected to a common output amplifier (D). According to one preferred embodiment, said image sensor comprises: a second amplifying element ( $B_j$ ) on the output of the memory element ( $M_j$ ); said common output amplifier (D) having at least two input terminals; means (S1) for switching the pixel's signal on the common output line ( $I_j$ ) and the memory element's signal ( $M_j$ ) to respectively third and second amplifying element ( $A_j$  and  $B_j$ ) of one column; and means (S2) for switching the two output signals of the amplifying elements ( $A_j$ ,  $B_j$ ) of one column to respectively first and second input terminals of said common output amplifier (D).



b